

6. (Amended) The method of claim 1, wherein the step of displaying further comprises the step of:

generating graphics to display the identity of each of the [node] one or more nodes, wherein a box is used to graphically represent [the node] each of the one or more nodes.

7. (Amended) The method of claim 1, wherein one or more nodes provide external connections to objects external to the database, the method further comprising the steps of:

activating [the] a desired node; and
accessing the external object linked to the desired node.

9. (Amended) The method of claim 8, wherein one or more nodes provide links to more than one independent application which can be executed as an extension, the method further comprising the [steps] step of:

displaying a list of independent applications linked to the desired node,
wherein the step of accessing accesses an independent application.

10. (Amended) The method of claim 8, wherein the [connection provides] external connections provide the independent application access to [the] information stored within the database.

11. (Amended) The method of claim 7, wherein the external [connection is] connections are to another computer[, wherein] having information [is located] that can be accessed, the step of accessing further comprising the step of:

accessing the information located within the computer.

12. (Amended) A method for determining [the] a proximity of an object stored in a [stored] database to another object stored in the [stored] database using indirect relationships, links, and a display, comprising:

selecting an object to determine [the] a proximity of other objects to the selected object;

generating a candidate cluster link set for the selected object, wherein the generating step includes an analysis of one or more indirect relationships in the database;

deriving an actual cluster link set for the selected object using the generated candidate cluster link set; and

displaying one or more of the objects in the database, referred to in the actual cluster link set, on a display.

14. (Amended) A method for representing [the] a relationship between nodes using stored direct links, paths, and candidate cluster links, comprising the steps of:

a) initializing a set of candidate cluster links;

- b) selecting [the] a destination node of a path as [the] a selected node to analyze;
- c) retrieving [the] a set of direct links from the selected node to any other node in the database;
- d) determining [the] a weight of the path using the retrieved set of direct links;
- e) repeating steps b through d for each path; and
- f) storing [the] determined weights as candidate cluster links.

15. (Amended) The method of claim 14 further comprising the step of deriving [the] actual cluster links, wherein the actual cluster links are a subset of the candidate cluster links.

17. (Amended) The method of claim 14, wherein the stored direct links are length L , the paths are counted $i = 0$ to N , the nodes are counted N_0 to N_{i+1} , the [weight's] determined weights of the paths are stored as C_{i+1} , and wherein the step of determining the weight of the path comprises the steps of:

- i) creating a new path P' of length $i+1$ consisting of [the] a path P plus the direct link L from the selected node to the node N_{i+1} , for each direct link L ;
- ii) calculating [the] a stored weight of the path (C_{i+1}) comprising the

steps of:

deciding whether there already is a path in [the] a cluster link from [Node₀ to Node_{i+1}] a node N₀ to the node N_{i+1} and a stored weight,

wherein:

if there is a not already [a] the path, the stored weight of the path (C_{i+1}) is set equal to P'[:,and

if there already is [a] the path, [the] a combined weight WC_{i+1} is added to the [already] stored weight of the [existing] path ([in]C_{i+1})[:],

wherein the combined weight[:, WC_{i+1}[:,] is computed from [the] a weight of the path P (WC_i), a dampening factor (D_{i+1}) and [the] a weight of the direct [Link] link L (W_{i+1}), and wherein the combined weight is computed using the following formula: WC_{i+1} = min(WC_i, D_{i+1} * W_{i+1}); and

iii) repeating steps i and ii for each direct link L.

18. (Amended) A method of analyzing a database having objects and a first numerical representation of direct relationships in the database, comprising the steps of:

generating a second numerical representation using the first numerical representation, wherein the second numerical representation accounts for indirect relationships in the database;

storing the second numerical representation;
identifying at least one object in the database, wherein the stored second numerical representation is used to identify the objects; and
displaying one or more identified objects from the database.

20. (Amended) The method of 18, wherein the step of identifying the at least one object in the database comprises:

searching for objects in [a] the database using the stored second numerical representation, wherein at least one of the direct and[/or] the indirect relationships are searched.

27. (Amended) A method of representing data in a computer database with relationships, wherein nodes or objects in [a] the database are represented by boxes of a default box size, and wherein various information types may be assigned to [node] nodes, node sub-types, links, and link sub-types to be placed within the box, and assigned information types contain information, comprising the steps of:

generating the links, wherein each link represents a relationship between two nodes and is identified by the two nodes in which the relationship exists;

allocating a weight to each link, wherein the weight signifies [the] a strength of the relationship represented by the link relative to [the] a strength of other relationships represented by other links;

generating the link sub-types;
generating the node sub-types;
selecting anchor points within the boxes for each information type;
placing each information type at [their] its selected anchor point;
determining whether [the information of] the placed information type overflows
the default box size, comprising the [step] steps of:
 adjusting [the] a position of the anchor points[;], and
 adjusting the size of the box;
determining whether [a] the placed information type overlaps another placed
information type within the same box, comprising the steps of[;]:
 adjusting the position of the anchor points[;], and
 adjusting the size of the box; and
displaying the box.

28. (Amended) A method of representing data in a computer database with
relationships, comprising the steps of:
 assigning [nodes] node identifications to nodes;
 generating links, wherein each link represents a relationship between two
nodes and is identified by the two nodes in which the relationship exists;
 allocating a weight to each link, wherein the weight signifies [the] a
strength of the relationship represented by the link relative to [the] a strength of

other relationships represented by other links; and
displaying a node identification.

29. (Amended) The method of claim 28, wherein the data in the database [is] are objects, wherein the nodes represent the objects and each object is assigned a node identification, and wherein the relationships that exist comprise direct relationships between the objects, further comprising the step of:

searching the generated links, wherein the nodes are located by searching the generated links.

31. (Amended) The method of claim 30, further comprising the step of:
specifying [the] a place to display the comment using a comment place holder.

32. (Amended) The method of claim 31, wherein multiple comments are provided to a link sub-type, further comprising the step of:
specifying [the] an order multiple comments appear in the comment place holder using a comment display order, comprising the steps of:

assigning each comment a value[;],

ranking the comments in order of their assigned value[;], and

displaying the comments in order of their rank.

33. (Amended) The method of claim 30, further comprising the step of:
determining whether the comment will appear in all displays using the
always display comment command, comprising the steps of:
 assigning each comment a binary value based on its importance[;],
 displaying comments which have been assigned [the] a first binary
value on all displays[;], and
 suppressing comments which have been assigned [the] a second
binary value from all displays, wherein only one node of the each link
sub-type is displayed.
34. (Amended) The method of claim 31, wherein icon files are assigned to the
link sub-types.
35. (Amended) The method of claim 31, wherein visual styles are assigned to
the link sub-types.
36. (Amended) The method of claim 28, wherein attributes are assigned to the
nodes.
38. (Amended) A method of representing data in a computer database and for
computerized searching of the data, wherein relationships exist in the database,